

Chen



Date: February 29, 1984
Subject: Monthly Report - February 1984

From/Location: D. M. Blake
To/Location: E. L. Cambridge

ALUMINA PROPERTIES

A literature search on alumina properties/smelter operation has been initiated. Don Ryan at Columbia Falls has informed me that the development of MGA specifications is underway and that he will gather the information he has concerning problems associated with the -20 micron fraction in alumina.

BAUXITE ANALYSES

Two samples from Aughinish are currently being analyzed. The work on available Al_2O_3 is complete. Reactive silica analysis has been delayed by furnace problems which should be corrected by February 24.

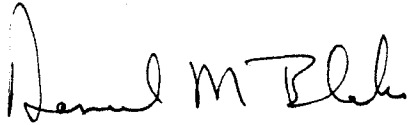
AD-123

1. Semi-pilot scale tests of a Merco C-9 continuous centrifuge established that SiO_2 particulates could be effectively removed from SPA mother liquors. Analyses of recrystallized and calcined products using this technique showed an acceptable SiO_2 content of 0.002%.
2. ACH decomposition tests have been delayed until a usable, non-contaminating tube can be installed. A mid-March test of Cabot Alloy 214 is planned. Materials of construction have been donated by Cabot with fabrication supervised by Bickley Furnace. If successful, this alloy will be incorporated into the AD-123 plant kiln.

Silicon carbide tubing has been received from Silag for lining the kiln if necessary.

3. Work on an AFC for the AD-123 High Performance Ceramic Oxide Plant has been completed and is scheduled to be submitted week ending March 2.

4. Initial evaluation of ceramic properties of ARCO high purity alumina shows properties essentially equivalent or exceeding the baseline data. The standard used for this study was Reynolds RC-HP DBM which has near theoretical thermal densification and good overall green forming characteristics. An extensive follow-up testing program of the chemical, physical and ceramic properties of ARCO SPA and HPA is currently being conducted.



D. M. BLAKE

DMB:dg

cc: J. C. Withers
D. S. Moran

kw: 0.8.1